

The opinion in support of the decision being entered today was *not* written for publication and is *not* precedent of the Board.

Paper No. 20

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte LEONARD T. KING

Appeal No. 1998-3054
Application 08/770,888

ON BRIEF

Before PAK, WARREN and OWENS, *Administrative Patent Judges*.

OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the examiner's final rejection of claim 10, which is the only claim remaining in the application.

THE INVENTION

The appellant claims a method for desuperheating steam.

Claim 10 is as follows:

10. A method for desuperheating steam having an initial amount of superheat located within a cylindrically-shaped conduit, said conduit having a longitudinal axis and circular cross-section, said desuperheater providing for injecting water droplets within a directionally moving stream of superheated steam, said desuperheater comprising a biscuit which is aligned along said longitudinal axis, said biscuit possessing an upstream face and downstream face and a plurality of openings where within said openings are located mixing elements which induce a rotational angular velocity to the superheated steam and water droplets passing therethrough, said desuperheater being further characterized such that all of said mixing elements induce the same rotational sign to said superheated steam and water droplets passing therethrough, said biscuit supporting a frustrum of a cone emanating from the upstream face thereof and aligned along said longitudinal axis, a feed leg radially emanating from the side wall of said conduit downstream of said frustrum which is in fluid communication with a bore located within said biscuit along said longitudinal axis thereof, said method further comprises passing a stream of water through said feed leg and bore located within said biscuit along said longitudinal axis thereof and discharging said stream of water through said bore in the form of water droplets in a direction counter to said directionally moving stream of superheated steam and passing said superheated steam and water droplets through said plurality of openings and mixing elements located therein whereupon said combination of water droplets and superheated steam are caused to assume a rotational angular velocity resulting in a dropping of the amount of superheat from said initial superheat amount.

Appeal No. 1998-3054
Application 08/770,888

THE REFERENCE

King et al. (King)	5,176,448	Jan. 5,
1993		

THE REJECTION

Claim 10 stands rejected under 35 U.S.C. § 103 as being unpatentable over King in view of the appellant's admitted prior art on pages 1-2 of the specification.

OPINION

We reverse the aforementioned rejection.

The appellant acknowledges that the King apparatus can be used to carry out the appellant's claimed method (brief, page 4). King states that his invention deals with a stationary mixing apparatus and a method for using the apparatus for mixing two or more fluids (col. 5, lines 6-8), and that "[t]he mixer of the present invention is uniquely designed to enhance the mixing of a low viscosity component such as a colorant or

dye into a high viscosity fluid stream such as a polymer melt"
(col. 1, lines 9-12).

The admitted prior art relied upon by the examiner is the teaching that it was known in the art to inject water droplets into a flow of superheated steam to desuperheat the steam (answer, page 4).

The examiner argues that King's statement that his apparatus is used for mixing two or more fluids encompasses use of the apparatus for mixing steam and water, and that because the apparatus is useful for desuperheating steam, it would have been *prima facie* obvious to one of ordinary skill in the art to use it for this purpose (answer, pages 4-5).

In order for a *prima facie* case of obviousness to be established, the teachings from the prior art itself must appear to have suggested the claimed subject matter to one of ordinary skill in the art. See *In re Rinehart*, 531 F.2d 1048, 1051, 189 USPQ 143, 147 (CCPA 1976). The mere fact that the prior art could be modified as proposed by the examiner is not

sufficient to establish a *prima facie* case of obviousness.
See In re Fritch, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783
(Fed. Cir. 1992). The examiner must explain why the prior art
would have suggested to one of ordinary skill in the art the
desirability of the modification. *See Fritch*, 972 F.2d at
1266, 23 USPQ2d at 1783-84.

King teaches that his apparatus is uniquely designed to
enhance the mixing of a low viscosity component such as a
colorant or dye into a high viscosity fluid stream such as a
polymer melt (col. 1, lines 9-12), causes additive emanating
from a frustrum to be distributed as thin radial sheets,
thereby producing a larger interfacial surface area between
the additive and the main component flow (col. 6, lines 11-
16), and provides an annular gap which enables a portion of
the main flow to travel through the annular gap outside and
around the biscuit and thereby prevent the downstream or
output additive sheets from contacting the conduit sidewalls
(col. 6, lines 38-42).

King's disclosed use of the apparatus, therefore, is much
different than mixing water into superheated steam. The

examiner relies upon the appellant's admission that it was known to mix water into superheated steam to desuperheat it, but has not established that one of ordinary skill in the art would have considered a device which is capable of mixing two or more fluids but is uniquely designed for mixing a low viscosity fluid into a high viscosity fluid such as a polymer melt, to be suitable for mixing water and steam. The motivation relied upon by the examiner for using King's apparatus to desuperheat steam comes solely from the description of the appellant's invention in the specification. Thus, the examiner used impermissible hindsight when rejecting the claims. See *W.L. Gore & Associates v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984); *In re Rothermel*, 276 F.2d 393, 396, 125 USPQ 328, 331 (CCPA 1960). Accordingly, we reverse the examiner's rejection.

DECISION

The rejection of claim 10 under 35 U.S.C. § 103 over King in view of the appellant's admitted prior art on pages 1-2 of the specification is reversed.

Appeal No. 1998-3054
Application 08/770,888

REVERSED

CHUNG K. PAK)	
Administrative Patent Judge)	
)	
)	
)	
CHARLES F. WARREN)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
)	
TERRY J. OWENS)	
Administrative Patent Judge)	

TJO/ki

Appeal No. 1998-3054
Application 08/770,888

Leonard Tony King
P.O. Box 7936
Four Embarcadero Center - 19th Floor
San Francisco, CA 94120